

Abstract

A resynchronization method for use in a data communication system having a first device configured to transmit data at a symbol rate to a second device. The second device includes a Reed Solomon (RS) decoder having a RS lock indicator and a Moving Picture Experts Group (MPEG) Protocol Interface (MPI) having a MPI lock indicator, wherein the RS and the MPI lock indicators are monitored. Four different states, defined by the values of the RS and MPI lock indicators, determine whether the data communication system will wait for the RS decoder and the MPI hardware block to resynchronize, whether an intermediate-subset of the channel acquisition algorithm is performed or whether the entire channel acquisition algorithm is performed. The method for resynchronization described herein recovers synchronization within a predetermined time without the layers above the physical link layer having knowledge.